

**Name: Cyanotype Set****SDS No: JCY1100 Date: 01/27/23****1. Chemical, Product and Company Identification****Product Name:** Ferric Ammonium Citrate Green and Potassium ferricyanide**Catalog Codes:** N/A**CAS#:** 1185-57-5 & 13746-66-2**RTECS:** N/A**TSCA:** N/A**CI#:** N/A**Synonym:**Ferric Ammonium Citrate Green: *Ferric Ammonium Citrate Green* ; Annomium Ferric Citrate ; Iron Ammonium Citrate ; Ammonium Iron (III) citrate ; 2-Hydroxypropane-1,2,3-tricarboxylate, ammonium iron (3+)salt

Potassium ferricyanide: none

**Chemical Name:**

Ferric Ammonium Citrate Green: ferric ammonium citrate

Potassium ferricyanide: potassium ferricyanide

**Chemical Formula:**Ferric Ammonium Citrate Green: C<sub>6</sub>H<sub>10</sub>FeNO<sub>6</sub>Potassium ferricyanide: K<sub>3</sub>Fe(CN)<sub>6</sub>**Contact Information:****Rupert Gibbon & Spider**

1147 Healdsburg Avenue

Healdsburg, CA 95448

800-442-0455

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887**For non-emergency assistance, call:** 800-442-0455**Importer -**

S&amp;S Wholesale Pty. Limited

18/10 Pioneer Avenue,

Thornleigh NSW 2120

Tel: 1300 731 529

Fax: 1300 739 715

**Emergency Contact:**

S&amp;S Wholesale Pty. Limited

Tel: 1300 731 529

Fax: 1300 739 715

**2. Composition and Information on Ingredients****Composition:**

Name	CAS #	% by Weight
Ferric Ammonium Citrate	1185-57-5	70.1
Potassium ferricyanide	13746-66-2	29.9

**Toxicological Data on Ingredients:** Category: Anti Anemic: Hematinic. Potassium ferricyanide: Oral (LD50): Acute: 2970 mg/kg [Mouse]**3. Hazards Identification****Routes of Entry:** Eye, ingestion, inhalation, skin contact.**Potential Acute Health Effects:** Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).**Potential Chronic Health Effects:** Slightly hazardous in case of skin contact (irritant). Mutagenic effects: Mutagenic for bacteria and/or yeast. Teratogenic effects: Not available. Developmental toxicity: Not available.**Signs and Symptoms of Exposure:** N/A**Medical Conditions Aggravated:** Repeated or prolonged exposure is not known to aggravate medical condition.**Carcinogenic:** Not available.**Mutagenic effects:** Not available..

**Teratogenic effects:** Not available.

**Developmental toxicity:** Not available.

#### **4. First Aid Measures**

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention

**Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with emollient. Cold water may be used. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek immediate medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

#### **Section 5: Fire and Explosion Data**

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available. **Flammable**

**Limits:** Not available.. **Products of**

**Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable in presence of open flames and sparks of heat.

**Explosion Hazards in Presence of Various Substances:** Slightly explosive in presence of heat.

**Fire Fighting Media and Instructions:** SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Toxic oxides of nitrogen or ammonia gas may be formed in fires.

**Special Remarks on Explosion Hazards:** Containers may explode when heated.

#### **Section 6: Accidental Release Measures**

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

#### **Section 7: Handling and Storage**

**Precautions:** Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep locked up. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingest, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light resistant containers.

**Section 8: Exposure Controls/Personal Protection**

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

**Section 9: Physical and Chemical Properties****Physical state and appearance:**

Ferric Ammonium Citrate Green: green deliquescent scales, granules or powder.

Potassium ferricyanide: Solid. (crystalline powder).

**Taste:**

Ferric Ammonium Citrate Green: Saline, mild ferruginous taste.

Potassium Ferricyanide: Not available

**Molecular Weight:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: 329.25 g/mole

**Color:**

Ferric Ammonium Citrate Green: Green

Potassium Ferricyanide: Red

**pH (1% soln/water):**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Boiling Point:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Melting Point:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Decomposes

**Critical Temperature:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Specific Gravity:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: 1.85 (water = 1)

**Vapor Pressure:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Vapor Density:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Volatility:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Odor Threshold:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Water/Oil Dist. Coeff.:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Ionicity (in Water):**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Not available.

**Dispersion Properties:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: See solubility in water.

**Solubility:**

Ferric Ammonium Citrate Green: Soluble in 0.5 parts of water and insoluble in alcohol.

Potassium Ferricyanide: Soluble in cold water.

**Section 10: Stability and Reactivity Data****Stability:**

Ferric Ammonium Citrate Green: The product is stable.

Potassium Ferricyanide: The product is stable.

**Instability Temperature:** Not available.**Conditions of Instability:**

Ferric Ammonium Citrate Green: Excess heat, light, incompatible materials.

Potassium Ferricyanide: Heat, light, incompatible materials

**Incompatibility with various substances:**

Ferric Ammonium Citrate Green: Not available

Potassium Ferricyanide: Reactive with acids.

**Corrosivity:**

Ferric Ammonium Citrate Green: Not available

Potassium Ferricyanide: Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Incompatible with ammonia, chromium trioxide + heat, sodium nitrite + heat, acids, and acid fumes. Sensitive to light. When heated to decomposition or comes in contact with acid or acid fumes, it emits toxic fumes of cyanides. It emits toxic fumes of cyanides and oxides of nitrogen when heated to decomposition.

**Special Remarks on Corrosivity:** Not available.**Polymerization:** Will not occur.**Section 11: Toxicological Information****Routes of Entry:** Inhalation. Ingestion.**Toxicity to Animals:**

Ferric Ammonium Citrate Green: LD50 (Rat): 2000 mg/kg

Potassium Ferricyanide: Acute oral toxicity (LD50): 2970 mg/kg [Mouse].

**Chronic Effects on Humans:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Mutagenic effects: Mutagenic for bacteria and/or yeast.

**Other Toxic Effects on Humans:**

Ferric Ammonium Citrate Green: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Potassium Ferricyanide: Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (premeator).

**Special Remarks on Toxicity to Animals:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: Lowest Published Leathal Dose: LDL [Rat] – route: Oral; Dose: 1600 mg/kg.

**Special Remarks on Chronic Effects on Humans:**

Ferric Ammonium Citrate Green: Not available.

Potassium Ferricyanide: May affect genetic material.

**Special Remarks on other Toxic Effects on Humans:**

Ferric Ammonium Citrate Green: Acute Potential Health Effects: Skin: May cause skin irritation or rash particularly with moist skin. Eyes: May cause eye irritation with redness, tearing and abrasion. Inhalation: Inhalation of high concentrations of dust may cause nasal, throat or lung irritation. Symptoms may include coughing and wheezing. Ingestion: May cause gastrointestinal tract irritation with hyper motility, diarrhea. Chronic Potential Health: Eyes: Prolonged eye contact may cause a brownish discoloration of the eyes. Skin: Prolonged skin contact may cause skin irritation.

Potassium Ferricyanide: Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: May cause eye irritation. Inhalation: May cause respiratory tract irritation with coughing and shortness of breath. Ingestion: may cause gastrointestinal tract irritation with nausea, vomiting, diarrhea, and possible abdominal cramping. Chronic Potential Health: Inhalation: prolonged or repeated inhalation may affect blood and urinary system. The toxicological properties of this substance have not been fully investigated.

### **Section 12: Ecological Information**

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### **Section 13: Disposal Considerations**

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **Section 14: Transport Information**

Ferric Ammonium Citrate Green:

**DOT Classification:** Not a DOT controlled material.

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

Potassium Ferricyanide:

**DOT Classification:** Class 9: Miscellaneous hazardous material.

**Identification:** Environmentally hazardous substances, solid, N.O.S. (Potassium Ferricyanide)

UNNA: 3077 PG: III

**Special Provisions for Transport:** Marine Pollutant

### **Section 15: Other Regulatory Information**

Ferric Ammonium Citrate Green:

**Federal and State Regulations:** TSCA 8(b) inventory: Potassium ferricyanide.

**Other Regulations:** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:** Not available.

**WHMIS (Canada):** Not available.

**DSCL (EEC):** Not available.

**Health Hazard:** 1

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 1**Flammability:** 1**Reactivity:** 0**Specific hazard:** Not available.**Protective Equipment:** Not available.

Potassium Ferricyanide:

**Federal and State Regulations:** TSCA 8(b) inventory: Potassium ferricyanide.**Other Regulations:** EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.**Other Classifications:****WHMIS (Canada):** Not controlled under WHMIS (Canada).**DSCL (EEC):** R36/38 – Irritation to eyes and skin. S2 – Keep out of the reach of children. S46 – If swallowed, seek medical advice immediately and show this container or label.**HMIS (U.S.A.):****Health Hazard:** 2**Fire Hazard:** 0**Reactivity:** 0**Personal Protection:** E**National Fire Protection Association (U.S.A.):****Health:** 2**Flammability:** 0**Reactivity:** 0**Specific hazard:****Protective Equipment:** Gloves. Lab coat, dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles**Section 16: Other Information**

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